# ALBERT FRADERA SOLA

I consider myself both collaborative and adaptable. I am always eager to tackle new and different projects. I am very enthusiastic to always share and develop my data visualization skills as a means towards better scientific communication. I am an open-minded person and enjoy having great relationships with my colleagues.



# My CV as an interactive network

Bullet points (Blue, for ≈ and ¼, and green, for € and ¼) are linked by year. Interactive version here

# CONTACT

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### SOFTWARE SKILLS

R
MaxQuant
Bash
Python

### LANGUAGE SKILLS

Catalan
Spanish
English

# **EDUCATION**

Current | 2018

# PhD Candidate in Quantitative Proteomics

JGU University

Mainz, Germany

• PhD thesis: Computational approaches to mass spectrometry based quantitative proteomics

2017 | 2016

### M.Sc. in Omics Data Analysis

University of Vic

Parcelona, Spain

- Master thesis: Development of a scoring function for finding differential expression application to Lolium Perenne
- · Erasmus + grant fellow



# RESEARCH EXPERIENCE

Current | 2018

### PhD Candidate

Falk Butter - Institute of Molecular Biology

Mainz, Germany

- · PhD candidate with Dr. Falk Butter (F.Butter@imb-mainz.de)
- $\cdot$  Publications: 1 first-author paper (in submission), 5 co-author papers

2017

### Master Student

Narcis Fernandez-Fuentes - IBERS

Aberystwyth, UK

- $\cdot \, \mathsf{MSc} \, \mathsf{student} \, \, \mathsf{with} \, \, \mathsf{Dr.} \, \mathsf{Narcs} \, \mathsf{Fernandez}\text{-}\mathsf{Fuentes} \, (\mathsf{naf4@aber.ac.uk})$
- $\cdot$  Publications: 1 first-authtor paper, 1 co-author paper



# WET LAB PROJECTS AND RELATED SKILLS

### Immunoprecipitation of RNA-binding proteins in S. cerevisiae

- I was responsible for designing the experimental setup and generating the data for the RNA-binding protein interactome investigation.
- $\cdot$  Keywords: Yeast | Protein Immunoprecipitation | Experimental design

# Mass spectrometry quantitative proteomics

- I used chemical labeling (DML) and label-free mass spectrometry sample preparation protocols on several projects
- $\cdot$  Keyword: Mass spectrometry | DML | LFQ | In-gel digestion

# 🖳 DRY LAB PROJECTS AND RELATED SKILLS

## Network-based assignment of RNA-binding proteins functionality

- Function-based networks were created from quantitative proteomics data and made accessible through a shiny app.
- · Keywords: Network | Functional analysis | KEGG | GO | R Shiny

### Temporal proteome profiling of Xenopus and Leismania species

- · Differential expression of proteomes was investigated at various stages
- · Clustering (Self Organizing Maps) and dimesionality reduction techniques (Principal Component Analysis) were applied.
- · Keywords: Proteome | Differential expression | SOM | PCA | Clustering

### Scoring function for RNA-Seq differential expression assessment

- · A scoring function was developed around three RNA-Seg differential expression assessment R packages (DESeq2, edgeR, limma+voom)
- · Keywords: NGS | RNA-Seg | Quality control | Differential expression

# ChIP-Seq characterization of a novel ATPase in T. brucei

- · H2A.Z deposition was investigated and visualized with genome tracks
- · Keywords: NGS | ChIP-Seq | Genome tracks

# SELECTED PUBLICATIONS

### **Projects with Genomics Analysis**

- · 2022 | PLoS Pathogens | https://doi.org/10.1371/journal.ppat.1010514
- · 2021 | Nature Comunications | https://doi.org/10.1038/s41467-021-22861-2
- · 2021 | PLoS One | https://doi.org/10.1371/journal.pone.0249636
- · 2019 | PLoS One | https://doi.org/10.1371/journal.pone.0220518

### **Projects with Proteomics Analysis**

- · 2021 | Journal of Cell Science | https://doi.org/10.1242/jcs.254300
- · 2020 | RNA | https://doi.org/10.1261/rna.076281.120

# CONFERENCES AND COURSES

### Conferences

- · 2022 | Statistical data analysis for genome-scale biology |Flash talk
- · 2021 | Network biology | Plenary talk
- · 2019 | FEBS advanced course | Poster presentation

# Courses

- · 2022 | Data visualization for scientists
- · 2021 | Scientific writing
- · 2020 | Convincing scientific presentations



Publication abstract's wordcloud

Document created with the R packages pagedown and datadrivency.

The source code is available on github.

Last updated on 2022-07-24.